



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,249	08/20/2003	Joe D. Allison	9863.0-02 (1856-38400)	6049
35181	7590	12/21/2005	EXAMINER	
CONOCOPHILIPS COMPANY			STADLER, REBECCA M	
P.O. BOX 2443			ART UNIT	
BARTLESVILLE, OK 74004			PAPER NUMBER	

1754

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/644,249

Applicant(s)

ALLISON ET AL.

Examiner

Rebecca M. Stadler

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “filament” in claim 1 is used by the claim to mean “nanotube”, while the accepted meaning is “things other than nanotubes.” The term is indefinite because the specification does not clearly redefine the term.

Claims 5-7 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a.) Claim 5 is inconsistent with claim 1, which it is dependent upon. The step of depositing for claim 1 appears to require that the metal and carbon filament are made separately. However, claim 5 adds the limitation that the metal and carbon filament are made concurrently.

b.) Claims 6, 7, and 9 recite the limitation that the metal is formed. It appears that deposited is meant instead of formed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1754

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 13-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Morin 4,680,093.

Regarding claims 1, 4, 6, 13-16, 19-21, and 30, Morin '093 teaches a process for producing metal-coated carbon filaments (see column 1, lines 16-22 and column 2, lines 37-41) comprising the steps of: depositing metal (by electroplating) (column 2, lines 48-50) on carbon filaments (see column 3, lines 24-31) produced from at least one carbon-containing feed. The last limitation of producing the carbon filament from a carbon containing feed is inherently met because all carbon filaments are produced by carbon containing feeds. If the feed did not contain carbon, it would not be able to make a carbon filament. This is true because of conservation of mass.

As to claims 2 and 3, these are product by process limitations within a process claim.

As to claims 17-18, and 27-29, these limitations are inherently met by the reference.

As to claims 22-25, Morin discloses metals that are known to catalyze. For example, iron acts as a Fischer-Tropsch catalyst, platinum acts as a dehydrogenation catalyst, and nickel acts as an alcohol production catalyst (see column 3, lines 36-39).

As to claim 26, Morin teaches a composite material (see abstract, lines 1-2).

As to claim 31, Morin discloses a carbon structure with at least 1 wt. % of the metal per weight of the carbon filaments (see column 5, lines 62-66).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 5, 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morin '093 in view of Warren 4,766,013.

The rejection of claim 1 above is incorporated herein by reference.

As to claims 5 and 10, Morin '093 does not disclose forming the metal and carbon filaments at the same time. Morin obtains the carbon filaments from an outside source. Warren '013 does disclose combining the steps of forming the carbon filaments and the metal deposition (see column 8, lines 32-38). It would have been obvious to one of ordinary skill at the time of this invention to combine the carbon filament and metal depositing step into one step in order to reduce the number of reactors required. In the alternative, it would have been obvious to combine the steps in order to have better control over the resultant process.

As to claim 8, Warren '013 discloses a metal oxide (see column 8, line 41).

Art Unit: 1754

As to claim 9, Warren '013 discloses depositing metals by CVD (see column 8, lines 38-41).

As to claims 11-12, Warren '013 teaches a hydrocarbon (see column 16, claim 7, lines 42-45) and an organometallic compound comprised of silicon (see column 16, claim 2, lines 9-13).

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morin '093 in view of Levitt 4157409.

The rejection of claim 1 above is incorporated herein by reference.

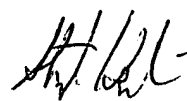
Morin '093 does not disclose depositing the metal by impregnation. Levitt '409 teaches metal impregnation of graphitic fibers (see Abstract). It would have been obvious to one of ordinary skill in the art at the time of this invention to use the metal impregnation of Levitt rather than the metal electroplating of Morin in order to eliminate the need for a cathode, ultimately simplifying the system.

Note, the Baird *Nature* reference, the Egashira reference, and the translation of the Weisbeck reference were not found.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rebecca M. Stadler whose telephone number is 571-272-5956.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

rms



STUART L. HENDRICKSON
PRIMARY EXAMINER